

Measles, Mumps, Rubella and the MMR Vaccine

This sheet is about exposure to measles, mumps, rubella, and the MMR vaccine in a pregnancy or while breastfeeding. This information should not take the place of medical care and advice from your healthcare provider.

What are measles, mumps, and rubella?

Measles (rubeola), mumps, and rubella (German measles, three-day measles) are viral diseases that are primarily spread from person to person through coughing and sneezing. The measles virus can stay in the air for up to two hours after an infected person has sneezed or coughed and can be spread to others even with the infected person is no longer in the area. Mumps can also be spread from close contact activities (such as playing sports) and from coming into contact with an infected individual's saliva (sharing cups, kissing, etc.). If an individual has rubella during pregnancy it can be passed to the developing baby.

Outbreaks of measles and mumps still happen in the U.S., especially in areas where vaccination rates are not high enough to protect the population. Rubella is no longer endemic (constantly present) in the U.S. but can be brought into the country by people who get infected in other countries. Once a person has been infected with measles, mumps, or rubella, it is rare for them to get sick from the virus again.

What are the symptoms of measles, mumps, and rubella?

Measles can cause rash, high fever, cough, runny nose, and red watery eyes. A person infected with measles can spread the virus to other people from 4 days before the rash appears until 4 days after it goes away.

Mumps can cause fever, headache, muscle aches, tiredness, loss of appetite, and swelling of the salivary glands under the ears, which can cause puffy and tender cheeks and jaw. Some people who get mumps may have mild symptoms or no symptoms at all. Even people without symptoms can spread the virus.

Rubella can cause a fever, sore throat, and a rash that usually starts on the face. Other symptoms may include headache, cough, runny nose, red eyes, and general discomfort. People with the virus can spread it to others for about 7 days before to 7 days after the rash appears. Some people who get rubella may have no symptoms, but can still spread the virus to others and their developing baby.

Rarely, serious problems can occur with these viruses, including pneumonia, meningitis, deafness, and death.

The best ways to protect yourself against measles, mumps, and rubella are to avoid others who are sick with these diseases, wash your hands with soap and water, and to get vaccinated before becoming pregnant. Others living in the home should be vaccinated.

I have measles, mumps, or rubella. Can it make it harder for me to become pregnant?

Rarely, a mumps infection can cause oophoritis, which is inflammation in the ovaries. Ovaries are eggs are stored and released. Oophoritis could make it more difficult for someone to get pregnant. It is not known if measles or rubella can make it harder to get pregnant.

Does having measles, mumps, or rubella increase the chance for miscarriage?

Miscarriage can occur in any pregnancy. Infection with measles, mumps, and/or rubella during pregnancy might increase the chance of miscarriage.

Does getting measles, mumps, or rubella during pregnancy increase the chance of birth defects?

Every pregnancy starts with a 3-5% chance of having a birth defect. This is called the background risk.

Based on the data available, it is unlikely that having measles or mumps during pregnancy increases the chance for birth defects.

If an individual gets rubella during pregnancy, the virus can pass to the baby and cause birth defects. This is called congenital rubella syndrome (CRS). Babies affected by CRS can have hearing loss, heart defects, cataracts (cloudy films that form over the lens of the eyes that can affect vision), growth issues, and developmental delay. Not all babies with CRS will have all these symptoms. A baby is more likely to be affected by CRS if the pregnant person gets rubella during the first trimester of pregnancy, although infection any time in pregnancy carries a chance of CRS. Because of these concerns, pregnant people are usually screened early in pregnancy to be sure they have antibodies to rubella.

Does having measles, mumps, or rubella cause pregnancy complications?

If a rubella infection occurs between 12 and 16 weeks, half of these babies are expected to be affected by CRS, and deafness is the most common complication reported with infection after the first trimester. A rubella infection during pregnancy can also cause growth issues for the baby. This is most likely to happen when an infection occurs prior to 16 weeks.

Having measles, mumps, or rubella during pregnancy might increase the chance of stillbirth (fetal death after 20 weeks). A measles or mumps infection near the time of delivery might also increase the chance of a baby being born with the infection, although this is thought to be rare.

Does having measles, mumps, or rubella in pregnancy cause long-term problems in behavior or learning for the baby?

Having a rubella infection in pregnancy has been shown to cause intellectual disabilities in some children. There is not enough information to know if measles or mumps can cause long-term problems in behavior or learning for the baby.

Can I breastfeed if I have measles, mumps, or rubella?

If you have measles, mumps, or rubella, talk to your healthcare provider about the best ways to prevent the spread of the illness to your breastfed baby. If you suspect that your baby has any symptoms of measles, mumps, or rubella, contact the child's healthcare provider right away.

Can having measles, mumps, or rubella make it harder for me to get my partner pregnant or increase the chance of birth defects?

Measles and rubella have not been studied for effects on male fertility. A mumps infection may temporarily decrease testicular size, but this is not likely to cause infertility (difficulty getting a partner pregnant). Infected partners can pass these viruses to a pregnant person through close contact. In general, exposures that fathers or sperm donors have are unlikely to increase the risk to a pregnancy. For more information, please see the MotherToBaby fact sheet Paternal Exposures at <https://mothertobaby.org/fact-sheets/paternal-exposures-pregnancy/>.

What is the MMR vaccine?

The MMR vaccine is a mixture of live but weakened measles, mumps, and rubella viruses. The vaccine causes a person to develop antibodies to these viruses and provides protection should they encounter these viruses in the future. These antibodies usually last for life. The vaccine may cause mild side effects including rash or joint aches. In the U.S. the vaccine is typically given during childhood in two doses.

I am not sure if I ever received the MMR vaccine. Should I get the vaccine before becoming pregnant?

It is recommended that all individuals of childbearing age who do not have immunity to MMR receive the vaccine at least one month before getting pregnant. If you were born outside the U.S., or are not sure if you were vaccinated, your healthcare provider can perform a blood test to see if you have antibodies to these viruses.

Does getting the MMR vaccine increase the chance of birth defects?

There is no evidence that getting the MMR vaccine during pregnancy would increase the chance of birth defects. The MMR vaccine is not recommended during pregnancy because of a very small chance of developing the disease from the weakened virus in the vaccine itself. This is very rare in the general population, and there has never been a documented case of CRS from the vaccine. Additionally, there is information from at least 1,600 pregnancies in which the MMR vaccine was given right before or during pregnancy, and no increased chance for birth defects was reported.

Does getting the MMR vaccine cause other pregnancy complications?

Because the MMR vaccine is not recommended for use during pregnancy, vaccination in the second and third trimester

has not been well studied. Therefore, it is not known if the MMR vaccine causes other pregnancy complications.

Will getting the MMR vaccine during pregnancy causes long-term problems in behavior or learning for the baby?

This has not been well studied. Based on the data available, it is not felt that MMR vaccine during pregnancy would cause long-term problems in behavior or learning for the child.

Can I get the MMR vaccine while breastfeeding?

The MMR vaccine can be given to individuals who are breastfeeding.

I got the MMR vaccine. Can it make it harder for me to get my partner pregnant or increase the chance of birth defects?

There are no studies looking at MMR vaccine and effects on male fertility. There are also no studies looking at possible risks to a pregnancy when a father or sperm donor receives the MMR vaccine. When a partner gets vaccinated, this can help protect the newborn from becoming infected with these illnesses. In general, exposures that fathers or sperm donors have are unlikely to increase risks to a pregnancy. For more information, please see the MotherToBaby fact sheet Paternal Exposures and Pregnancy at <https://mothertobaby.org/fact-sheets/paternal-exposures-pregnancy/>.

Please click here for references.

Questions? Call 866.626.6847 | Text 855.999.3525 | Email or Chat at [MotherToBaby.org](https://mothertobaby.org).

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